

## **EXHIBIT A**



# THE YELLIN CENTER

FOR MIND, BRAIN, AND EDUCATION

September 23, 2011

Ajay Bahl  
151 Wentworth Ave.  
Albertson, NY 11507

Dear Mr. Bahl:

Please find our report from your recent assessment enclosed. As you review the report, please note that a glossary is included to provide definitions of italicized terms. A follow-up meeting to review the report and develop an implementation plan is included in the assessment program fee. Please call us to schedule this meeting after you have reviewed the report. To help optimize this meeting, please use the enclosed worksheet to jot down any thoughts, questions, and comments that come to mind as you read the report, and return it to us prior to your scheduled meeting.

It was a pleasure working with you, and we look forward to continued collaboration.

Sincerely,

The Yellin Center Team



## THE YELLIN CENTER

### **Comprehensive Neurodevelopmental Assessment**

**Ajay Bahl**

Date of Birth: **1/21/1985**

Date of Assessment: **8/29/2011**

Age at Assessment: **26 years**

### **CLINICAL TEAM**

**Paul B. Yellin, M.D., F.A.A.P.**

**Beth Guadagni, M.A.**

### **REPORT FORMAT OVERVIEW**

To assist the reader, this report is divided into discrete sections. The section entitled "Learning Profile" highlights Ajay's assets and difficulties. The "Linking Profile to Academics" section includes a discussion of the linkages between Ajay's profile and his school performance. Ajay's unique "Learning Plan" contains recommended strategies for his specific profile. Finally, the "Neurodevelopmental Data" section provides the supporting evidence used by the clinicians to develop Ajay's profile of strengths and challenges. Some of this evidence is in the form of interpretive statements that specifically describe his approach to both neurodevelopmental and academic tasks. Additional evidence is presented in the form of subtest scores. These standardized scores compare Ajay's performance to that of a sample of same-age peers; such scores are merely one type of information that should be considered along with the other findings contained in this report. A summary of Ajay's medical, social, and emotional information is also included, as this is important neurodevelopmental data within our interdisciplinary model of assessment.

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The report is designed to be shared in its entirety; however, specific individuals working with Ajay may find certain sections more applicable to their situations. In addition, italicized terms appear in the attached glossary along with their definitions.

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**Ajay Bahl****8/29/2011****REFERRAL CONCERNS**

Ajay is a 26 year old student with long-standing attention deficit, ~~anxiety~~, and speech problems, who is completing his third year at the New York College of Osteopathic Medicine (NYCOM). He was referred to the Yellin Center by Dr. Lenard Adler, his psychiatrist, for assessment and treatment of ongoing academic difficulties.

**BACKGROUND INFORMATION**

Ajay's history was somewhat challenging to obtain because he often spoke rapidly and generally provided non-specific answers to questions about his academic performance. He noted that he has had long-standing ADHD, anxiety, and speech difficulties ("cluttering"). However, when asked about his academic performance, he stated that he "never really excelled" because he has "problems with systems." With further querying, it appeared that he meant that he does not have a systematic approach to working or studying. At some point during the initial interview he did volunteer that his referral was at least in part precipitated by his recent failure of Step 1 of the USMLE.

Ajay was born on the south shore of Long Island and lived in Elmont, NY before moving to the Herricks School District. His mother is a cardiothoracic nurse practitioner at Mount Sinai Medical Center and his father is "involved in information technology at HHC." He has an older brother who has had academic difficulties and "failed out of Stony Brook", but now owns his own business. His sister is a first year psychiatry resident at Temple.

Ajay initially attended the Elmont Public Schools before his family moved and he attended Herricks High School. Ajay's academic history was hard to follow, but it seemed that he did receive good grades but that he had to work long hours. He attributed his long hours to "inefficiency due to the ADHD and anxiety." He stated that he "liked math and science" but did not do well in foreign language, which he attributed to his feeling that it was "pointless and involved pure memorization."

He attended NYU where he majored in psychology. After graduating, he entered the NYCOM. While he did reveal his recent Step 1 failure, he seemed reluctant to share any other specifics about his academic difficulties beyond the fact that he notices that his classmates seem to approach their work systematically while he feels that he has no strategies or systems.

**Ajay Bahl****8/29/2011****LEARNING PROFILE**

**Introduction.** The major features of Ajay's profile will be described in this "Learning Profile" section. His strengths and challenges will be discussed, including how they relate to his academic performance.

On August 25, 2011, Ajay met with Dr. Yellin to review Ajay's medical and academic history. He then returned on August 30 and worked with Ms. Guadagni and Dr. Yellin on a series of academic and neurodevelopmental tasks, including subtests of standardized neuropsychological batteries and additional tasks designed specifically to isolate and assess Ajay's neurodevelopmental functions and their relationships to learning and academic output. The following cognitive profile is the synthesis of the data, including quantitative and qualitative findings. It is presented briefly below, and then described in more detail, including a discussion of the linkages between Ajay's learning profile and specific aspects of his academic work.

**Strengths.** Ajay's neurodevelopmental profile includes the following assets:

- **higher order cognition** (complex and sophisticated thinking)
- **short-term memory** (briefly remembering new information)
- **active working memory** (mentally suspending information while using or manipulating it)
- **long-term memory storage** (placing information in memory)
- **spatial ordering** (interpreting and creating material that is visual or spatial)
- **semantic understanding** (knowing the meanings of words- though not necessarily using or defining them)
- **sentence comprehension** (understanding sentences and sentence structures) and **sentence formulation** (expressing thoughts in complete, grammatically correct sentences)
- **mental work stamina** (the flow of energy needed for cognitive work output, such as doing homework)

**Challenges.** The following weaker functions contribute to Ajay's academic difficulties:

- **long-term memory access** (retrieval of information from long-term memory)
- **specific aspects of language:**
  - **word retrieval** (finding the right words quickly and easily)
  - **discourse processing** (interpreting language that is longer than a sentence, such as paragraphs, chapters, or stories)
- **regulation of processing depth** (managing intensity of focus to appreciate individual details, overarching themes, and part-to-whole relationships)

how to overcome?



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In addition, across neurodevelopmental areas and academic skills, Ajay exhibits ~~slow rate~~ regarding both processing of information and production of work and limited ~~strategy use~~ (approaching tasks systematically).

**LINKING PROFILE TO ACADEMICS**

**Overview.** Ajay is particularly insightful in acknowledging that he lacks a systematic approach to his academic work. The volume and complexity of the material that one must master in medical school is not manageable in the absence of a strategic approach when deciding what to learn and how to learn it. Ajay's need for strategies is particularly pressing in the context of his long-standing attention deficit and anxiety, as well as the other areas of weakness in his learning profile. Despite these challenges, it is clear that Ajay is a bright, determined young man with a number of critical areas of strength that he can apply to overcoming his difficulties.

However, Ajay's challenges are contributing to a clinically significant reading disability which is evident on standardized assessments with the Nelson-Denny Reading Test (reading rate at the 14<sup>th</sup> percentile) and the Woodcock-Johnson III Tests of Achievement (reading fluency at the 15<sup>th</sup> percentile). In addition, when assessed informally, Ajay read approximately 99 words/minute, which is in the average range for second grade. Due to his slow reading in addition to his generally slow rate of processing and production, reading, studying, and writing are extremely time consuming for Ajay. Therefore, reasonable accommodations for Ajay's disability will need to include 2x extended time for all examinations.

**Linking Profile to Academic Success.** Despite his struggles, it is clear that Ajay possesses a number of significant neurodevelopmental strengths that can help him successfully navigate through his medical school curriculum. For example, his strong performance on the Similarities subtest of the WAIS-IV (i.e., 91<sup>st</sup> percentile) was indicative of his excellent grasp of verbal concepts. Specifically, when presented with word pairs (e.g., friend and enemy), he did an excellent job looking beyond superficial differences to appreciate and describe those underlying critical features, ideas, and relationships that they shared (e.g., 'friend' and 'enemy' are similar in that they both describe 'people for whom you have strong feelings.'). The ability to work with concepts is a critical part of higher order cognition that will be particularly important for Ajay as he moves forward in medicine. A concept is a set of related critical features that creates a category or idea. Because Ajay is able to understand concepts, his memory is spared since he does not need to learn numerous examples.

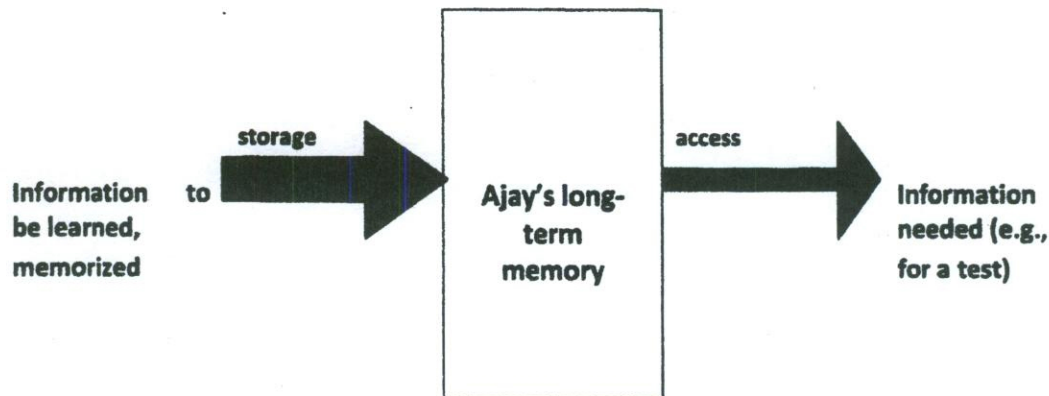
Ajay also demonstrated his ability to apply solid reasoning and logical thinking as well as problem solving to clinical situations in the patient write-ups that he provided for our review. Finally, he displayed solid pattern recognition in his performance on a challenging Matrix task which began with a series of pictorial and geometric analogies but then involved increasingly abstract and complex geometric patterns. Specifically, he was shown 3 x 3 grids consisting of 8 complex geometric figures and asked to select, from a multiple-choice format, the figure that should be placed in the 9<sup>th</sup> spot. He was able to discern even the most complex patterns and select the correct answer. However, he worked at an extremely slow pace and at times seemed to agonize over the specific feature that was most relevant to the underlying patterns. Ajay's higher order cognition is apparent in his capacity for reasoning, using logic, solving problems



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(not just in math), grasping rules, thinking critically, and forming concepts. Higher thinking is essential for understanding material, rather than simply memorizing information. Probably more than any other aspect of his profile, Ajay's higher order cognition bodes well for success in medical school and beyond.

While Ajay's limited use of strategies and weak attention lead to inconsistent performance on memory tasks, his underlying memory systems appear to be sufficient for meeting the great information storage demands of medical school. For example, his *long-term memory*, like the hard-drive of a computer, enables him to permanently store information, link it to his previous knowledge, and to access and use it when needed in the future. However, long-term memory includes two complementary functions: information storage and information access. Ajay seems to be able to store information, but he has a hard time accessing it. As the diagram below illustrates, he puts a lot more into his memory than he can retrieve.



Because he can store information, Ajay is able to recognize it, even if he has trouble recalling it. As we will discuss in the next section, this memory pattern is typically reflective of ineffective memory strategies. In other words, as Ajay becomes more strategic in his approach to his studies, it is likely that he will enhance his ability to access the information that he has stored.

When considering how our minds organize information that we process or produce, it is useful to think in terms of two ordering systems: *temporal-sequential ordering* and *spatial ordering*. The temporal-sequential ordering system, or sequencing, is important for managing information that is linear, consists of discrete data elements, and is organized in a specific order (e.g., physiological processes, steps in a procedure, or events in a history of present illness). In contrast, spatial ordering allows one to appreciate visual information and structures (e.g., an anatomic structure, radiologic images, or a gram stain). It is not unusual for people to demonstrate a predilection for one of these ordering systems. For example, Ajay appears to do best when information has a strong visual component or is highly contextualized, reflecting his solid spatial ordering. Hence, it will be important for him to use visual aids when studying and to link information to specific patients or clinical experiences.



Ajay's excellent vocabulary and his solid sentence comprehension and sentence formulation are critical foundational aspects of language that he can leverage to help him manage his long-standing language difficulties. His language abilities, together with his solid interpersonal skills, will be important in helping in relate with patients, families, peers, supervisors, and other staff members. Finally, his impressive mental work stamina and his high level of motivation are noteworthy, already helping him overcome his challenges to reach this point in his career.

**Linking Profile to Academic Concerns.** In short, Ajay is a bright, determined, and hard-working young man whose neurodevelopmental profile includes many areas of strength that can help him overcome his struggles and experience success in his studies and beyond. However, moving forward, it will be important for him to implement specific strategies to address his challenges while maximizing his strengths. At this time, Ajay's struggles most relate to the following weaker parts of his learning profile: long-term memory access, specific parts of language (i.e., word retrieval and discourse levels of language), and regulation of processing depth. In addition, across neurodevelopmental functions, his performance is affected by challenges with part-to-whole processing, slow rate of processing and production, and limited strategy use. In this section, we will highlight some of the major implications of these challenges.

***What are the implications of Ajay's weak long-term memory access?*** Ajay's weak long-term memory access or retrieval is a significant factor in his academic difficulties. A memory retrieval problem is analogous to having a well-stocked library but an inefficient system for finding the necessary books at the right time. Even if Ajay has stored the information he needs, he frequently has trouble retrieving it, particularly if the questions are open-ended.

It is likely that Ajay's long-term access problems reflect his limited repertoire of memory strategies. Because of difficulty with memory strategies, studying is problematic for Ajay; when he does not store information systematically, he has a hard time retrieving it later when taking tests or quizzes. Specifically, he has difficulty categorizing incoming information and filing it in his mind "next to" other related topics. This inefficient filing system causes him to have problems retrieving information quickly and efficiently on rounds or during examinations. There are many ways to absorb information, and the most effective ways involve transforming the material rather than passively trying to memorize by rote. Ajay needs to expand his toolbox of techniques for transforming and storing information.

***How does Ajay's struggle with regulation of processing depth affect his performance?*** Attention can be viewed as a set of mental abilities, grouped into three control systems. The first is the *mental energy control system*, which maintains alertness and "fuel" for thinking and cognitive effort. The second is the *processing control system*, which handles input (e.g., information heard or seen). The third is the *production control system*, which regulates behavior and academic output, such as math homework or an essay.



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At this time, Ajay is struggling most with his processing controls, particularly his regulation of processing depth. Processing depth refers to the intensity of focus and is akin to a camera's lens. At times, one must focus intently on specific details, as with a telephoto lens. At other times, we need to pull back, as with a wide angle lens, to appreciate the "big picture" (i.e., main ideas and overarching themes). In fact, we are constantly readjusting our processing depth between individual details and overarching themes so we can understand how all of the details relate to each other and to the big picture (i.e., part-to-whole processing). The figure below illustrates the impact of varying processing depth.

|                                       | levels                   | features/signs  |
|---------------------------------------|--------------------------|---|
| When Ajay focuses too deeply >        | over-focused on details  | <ul style="list-style-type: none"> <li>• spending a lot of time focused on one problem</li> <li>• redoing and second-guessing answers</li> <li>• taking much longer than anticipated to finish assignments/tasks</li> </ul>                                       |
|                                       | optimal level of focus   | <ul style="list-style-type: none"> <li>• focusing with sufficient intensity to take in important details</li> <li>• balancing the "big picture" and the smaller details</li> <li>• completing assignments/tasks in the appropriate amount of time</li> </ul>      |
| When Ajay focuses too superficially > | under-focused on details | <ul style="list-style-type: none"> <li>• reaching the bottom of a page and not remembering what you just read</li> <li>• getting the gist of something but not remembering the details</li> <li>• finishing an assignment much faster than anticipated</li> </ul> |

Ajay has trouble gauging how much he should attend to details. At times he over-attends and gets bogged down in the fine points. This can lead to difficulty stepping back and perceiving the big picture. Put another way, Ajay concentrates so much on the trees that he struggles to see the forest. Processing too deeply can also result in a slow work rate for Ajay, as he spends excessive time wrangling over details. Transitions can also be problematic because he is so centered on small elements that he struggles to disengage and move on to another topic or task.

However, at other times, he does not focus deeply enough. At those times, because of his shallow processing depth, Ajay frequently glosses over material and misses details, affecting his understanding and accuracy in areas such as *reading comprehension* and *math reasoning*. Shallow processing depth is particularly problematic for Ajay when he is listening (vs. reading). When listening, he usually only gets one pass at the information and he cannot control the



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speed with which it comes. In contrast, if he needs to, he can read more slowly or reread things, allowing information to sink in more deeply.

Ajay's difficulty distinguishing important information from less important information (saliency determination) also leads to being distractible. In other words, his focus can be attracted more to other sights and sounds than to the material or task at hand. A critical aspect of studying is deciding what information is important and most likely to be asked about on the test, which is also difficult for Ajay because of his weak saliency determination. Weak saliency determination can make distinguishing among possible choices on multiple-choice questions challenging, particularly when there are subtle differences among the choices. Finally, we rely on saliency determination when setting priorities for allocating time and for organizing materials and discarding extraneous materials to avoid clutter.

**Why is reading difficult for Ajay?** Due to weak word retrieval, Ajay's decoding is choppy and somewhat dysfluent, affecting both his rate and comprehension. Because Ajay struggles with saliency determination, it is difficult for him to identify main ideas or relevant information. Ajay's superficial processing depth makes it difficult for him to read with sufficient concentration or understanding because he glosses over key points and important details. He has trouble using his long-term memory access to link any prior knowledge or experiences to what he is currently reading. Connecting previous knowledge to the text bolsters understanding and helps with retention of new information. His slow processing rate diminishes his understanding of reading passages; he reads so slowly that he often forgets what he read earlier in the text. As a result, Ajay has trouble understanding lengthy passages, when reading or listening (i.e., weak *discourse processing*). Put differently, he has a hard time grasping how multiple sentences relate to each other to convey meaning (e.g., a story, information, or an argument). Ajay's reading comprehension improves when he confronts a reduced chunk size of text.

**Rate.** Ajay has a hard time getting things accomplished because of a generally slow rate of processing and production. Put another way, he requires a bit more time to complete most tasks. It is important to note that his production rate is an aspect of his neurodevelopmental profile, meaning that he does not work slowly out of laziness. While his production rate needs to be understood and accommodated, there are strategies for increasing his work speed that will be included in his learning plan.

**Strategy Use.** Ajay has trouble coming up with the best strategies for figuring out solutions to problems and completing tasks. He tends to approach things passively and unsystematically. For instance, he might rely on rote memory rather than utilize a study plan, or compose a single draft instead of staging his writing process, or try to compute in his head as opposed to using diagrams to solve math problems. His limited strategy use contributes to his disorganization which further undermines his productivity. Efficient work requires a degree of organization in terms of handling materials, keeping to a schedule, and structuring one's thinking. If he were



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more organized in these areas, Ajay could better use his assets to generate quality output. Ajay will need to develop his capacity to generate his own strategies (e.g., to memorize for an exam) as well as to learn more proven strategies. Determining the appropriate strategy for a task needs to be one of the first things Ajay does when he is working.

**Anxiety.** Learning and academic performance are affected by emotional state, while academic performance also affects anxiety. For example, significant worrying can decrease mental energy and disrupt any of the neurodevelopmental constructs. Also, learning problems frequently lead to uneasiness about school, which in turn contributes to worrying. Therefore, it will be important to address both Ajay's learning and emotional issues in his learning plan.

**Conclusions.** Ajay's learning profile includes many neurodevelopmental strengths that represent good potential for success in medical school. However, his ability to harness these areas of strength is undermined by the weaker parts of his learning profile. Ajay's constellation of challenges is consistent with the following diagnoses:

- ~~Attention Deficit Disorder, Inattentive~~ (ICD-9-CM-314.00)
- ~~Frontal lobe and executive function disorder~~ (ICD-9-CM-799.55)
- ~~Mixed Receptive and Expressive Language Disorder~~ (ICD-9-CM-315.32)
- ~~Anxiety Unspecified~~ (ICD-9-CM-300.00)

However, in our view, it will be more important for Ajay and those working with him to understand his needs in the context of a more nuanced view of his specific profile of strengths and challenges. With such understanding and the associated implementation of an effective combination of interventions, bypass strategies, and accommodations, it is likely that Ajay will make steady gains in his learning and refine his skills and abilities. We look forward to reviewing our findings, impressions, and recommendations with Ajay.

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**LEARNING PLAN**

**Introduction.** Ajay, based upon your learning profile, we have included a variety of interventions and accommodations, which can be implemented across a variety of settings. We realize that some of these may already be in place while others may have been tried in the past unsuccessfully. Some of the recommendations may not suit a particular setting or fit with a specific combination of personalities with whom you may be working. We recognize that you have insights that we could not possibly have as to the types of strategies that may be successful. Therefore, we offer a number of suggestions so that you can choose the most suitable ones for your situation. During the report consultation, we can assist you in prioritizing strategies and planning for their implementation.

**1. Ajay, demystification is the process of taking the mystery out of learning.** It should be ongoing and you may want to use this report as a starting point. It is important for you to be able to verbalize your understanding of how your mind works and use appropriate vocabulary to describe your strengths and weaknesses. You might benefit from paying close attention to times when you will need to be using specific functions in everyday activities such as recalling a phone number (sequential memory), organizing materials for cooking, work, or a hobby project (spatial or sequential ordering), or giving someone instructions on how to find your house (expressive language). It is also important to understand the rationale behind the strategies you choose to use, and how they connect to your particular strengths and weaknesses. It is important that you understand that everyone has weaker and stronger parts of their minds. Even those people who seem to do everything with ease have some areas in which they have to work hard to achieve. You need to know that your issues are not pervasive and that there are bright possibilities in your future.

**Strategies to Improve Reading Comprehension**

**\*1. You should explicitly choose reading strategies to use while reading.** Having a specific strategy in mind will help focus your thoughts and keep you actively engaged in the text. A handout, *Reading Strategy Sentence Starters*, is included with this report.

**2. It might benefit you to have a list of questions about your reading material available before you read to draw your focus to the most critical information.** If you don't have access to study questions or a study guide, you can try making your own questions. Flip through reading material before you begin to read and consider what you already know about the topic and what information would be important to absorb, then compose some of your own questions or collaborate with a peer to formulate a list.

**3. You may find it beneficial to work with a speed-reading program in order to help improve your reading rate.** Following are two recommended programs:



- **Davidson Ultimate Speed Reader** ([www.humanexcellence.com/products/ultimate-speed-reader](http://www.humanexcellence.com/products/ultimate-speed-reader)) offers six activities to increase peripheral vision, improve eye movement, and increase overall reading speed.
- **Eye Q by Infinite Minds** ([www.eyeqadvantage.com](http://www.eyeqadvantage.com)) is a "brain enhancement" program that uses reading speed to measure its effectiveness and give immediate feedback to the user. Eye Q increases reading speed, which is why it is often called a speed-reading program.

**4. You need to solidify your oral fluency much like an athlete or musician practices and 'over-learns' basic skills.** You should engage in ~~fluency training sessions~~ (i.e., repeated practice), with a ~~tutor or mentor feedback/guidance for five to six minutes a day over an extended period~~ of time. The goal of these sessions is for you to ingrain words so deeply that you can read them aloud without conscious thought. ~~For example, you should begin with a simple passage that you can read relatively easily and quickly.~~ Practice reading the same passage at least four times ~~per sitting~~. Measure your fluency rate and graph the results.

#### Strategies for Testing

**\*1. To help you determine what is important to study, make up sample tests and write questions that you predict will be on the actual test.** You could also take the test for practice, ideally a day or two after constructing the test.

**\*2. Take practice tests.** This will familiarize you with the format of the exam and the strategies needed for that format. At first, take these practice tests in an untimed manner. After you feel comfortable with your strategies, begin to take them under time constraints. It is important to practice taking the exams with the added pressure of time, which can lead to anxiety within testing situations.

**3. When taking multiple-choice tests, you may often become stuck, over-focusing on information about which you are unsure.** You would benefit from first reviewing the question prior to reading the vignette. Another option is to first read the vignette to gain an overall gist, then reread for details. This will help your mind to focus on the salient details, rather than become distracted by extraneous information.

**4. When taking a test, you should first jot down memory aids, formulas, or important facts in the margins before you begin work.**

**\*5. Stepwise approaches could really help you tackle extended tasks, like studying for a major exam:**

- You should break down complex and multi-step tasks into long-term goals (e.g., "When is my project due and what will it look like when it's finished?") and short-term



objectives (e.g., "What part of my project needs to be done tonight?"). Plans for tasks that occur frequently (e.g., regular monthly assignments) can be compiled into a notebook and kept for easy reference during future work assignments.

- Checklists also provide built-in reinforcement as it can be very satisfying to check off goals and objectives as they are completed. You may need some coaching in how to create and use checklists, but as you gain experience it should become your responsibility to use them independently. Those working with you can then review the checklists and help you develop a good plan to facilitate homework completion.

### Strategies to Improve Long-Term Memory Retrieval

**1. Studying and memorizing can be much more efficient and effective when information is learned in multiple ways.** You may find studying more engaging and the material more interesting when you use different forms of mental representation. For example, a concept can be learned by thinking of a good example of it, relating it to personal experience, and by constructing some sort of diagram depicting it. The enclosed handout, *Forms of Mental Representation*, contains a list of different possible ways to learn information. Using all of the listed forms is not the goal. Rather, you should try three or four per concept or piece of information. Over time and with practice, you will become more comfortable with some that work particularly well for you. You may even come up with other forms of mental representation that are not on this list.

**2. When studying and taking notes, you will benefit from using a method that allows you to process the information before, during, and after a lecture:**

- Before the lecture, make sure to read the text using active reading strategies.
- During the lecture, take detailed notes and be sure to write down important information. It may be helpful to tape record the lecture in order to ensure that your notes are complete.
- After the lecture, reread your notes, fill in any missing information, and write a one or two sentence summary at the end of each page. This will be a useful review of your notes as you prepare for a test.

See the enclosed handouts, *Cornell Note Taking Method* and *Cornell Note Taking Template*.

**3. To leverage your spatial ordering, you should use graphic organizers for note-taking as you read and study.** A handout, *Graphic Organizers*, is included that contains several templates for graphic organizers. You may find it more helpful to generate your own templates.

You may want to consider a software program that will help you organize information. Look at programs that produce both graphic diagrams (such as concept maps and flowcharts) and



sequential outlines. For example, Inspiration software ([inspiration.com](http://inspiration.com)), converts outlines to maps and/or diagrams and vice-versa, and allows the user to shift back and forth. Austhink ([austhink.com](http://austhink.com)) provides a visual framework to organize information and structure arguments. Mindjet MindManager ([www.mindjet.com](http://www.mindjet.com)) is yet another tool for helping one organize ideas and projects using a visual format.

**\*4. When studying, you would benefit from interleaving the practice of different skills, or studying across multiple topics.** By studying a mix of questions that focus on a variety of topics, you can truly study and assess your knowledge of these content areas. You should create a study plan where no two problems of the same kind appear consecutively. Please refer to the article, by Kelli Taylor, A. and Rohrer, D. (2010). The Effects of Interleaved Practice. *Applied Cognitive Psychology*, 24, 837-848.

**\*5. You should find opportunities to be an active processor of information.** Some strategies that would help to improve your depth of processing are repeating something you just heard to yourself in a whisper, summarizing orally what you read, drawing a semantic map of what you heard, etc. Another helpful strategy would be to form pictures in your mind when you are learning new information. For example, you could make a movie in your mind, and picture yourself actually implementing the information you are hearing in lecture. The following are some examples of how to implement this strategy:

- Create a clear diagram of the anatomical structures involved in the topic being studied.
- Develop a flowchart of processes involved, time, course of symptoms, etc.
- Develop a clinical vignette that illustrates the principles.

**6. Students like you, with difficulty regulating processing depth, must be encouraged to interrelate what they have learned.** Compare and contrast ideas, facts, and procedures. For example, it would be helpful to compare and contrast a topic that you are currently learning about (such as the long-term outcome of unstable angina) with events you have learned about previously (such as long-term outcome of type 2 DM).

#### **Strategy to Improve Your Accuracy**

**1. Small errors often compromise the accuracy of your work.** Although you have a clear understanding of concepts and procedures, your difficulty with processing depth can cause you to make "careless mistakes." You can best reduce the number of these errors by being aware of the types of mistakes you tend to make and becoming accustomed to scanning for them. It might be helpful for you to track the types of errors you make to determine where your pitfalls lie. You can then make a checklist to remind you of what to look for when you check your work. Gaining an understanding of the types of details you tend to miss will help you check your work more effectively and efficiently.

**Ajay Bahl**

**8/29/2011**

**\*Highest Priority Strategies**

**Academic Adjustments and Accommodations**

In our view, your struggles do constitute a disability significant enough to qualify for accommodations under the Americans with Disabilities Act (ADA). Medical schools vary in their processes/procedures for obtaining accommodations. In addition, obtaining accommodations for the USMLE is often a complex process with uncertain outcome. Nonetheless, we believe that you should be provided the following accommodations:

1. Due to Ajay's slow rate of processing and production and extremely low reading fluency, he will require the maximum extended time for all examinations, but not less than 2x the standard time.
2. Due to his word retrieval struggles, Ajay should be given advanced warning before being called on in rounds. The purpose of this warning is to provide him a few moments to organize his thoughts and words, and therefore need not be more than five or ten minutes.



**Ajay Bahl****8/29/2011****SUMMARY OF FINDINGS**

**Neurodevelopmental Strengths.** Ajay's neurodevelopmental assessment incorporated a comprehensive array of tools that were used both quantitatively and qualitatively. Findings were integrated with information from Ajay to uncover his profile. This section includes examples of the evidence used to identify his assets. These examples represent only a portion of the information compiled during the assessment, but are representative of the findings. In some instances, standardized measures were used that generated normed scores that are included at the end of this report. Such scores should be interpreted in conjunction with all of the information about Ajay, including qualitative findings.

**higher order cognition**

- skillfully explained how word pairs were related conceptually (e.g., enemy and friend are similar in that they both describe people for whom you have strong feelings)
- determined how pairs of pictures were related and then applied the relationships to other picture pairs (this task did not involve language)
- displayed solid analysis and synthesis in his patient H & P write ups
- when asked to identify a target object from a set of objects through yes/no questions (akin to the "Twenty Questions" game), he was able to formulate series of questions that allowed him to identify objects with relatively few questions

**short-term memory**

- remembered an appropriate number of list words after a short delay
- accurately repeated lengthy sentences

**active working memory**

- remembered an age-appropriate number of list words while simultaneously sorting them (e.g., animals vs. non-animals) and ordering them (e.g., smallest to largest)
- able to reverse number series
- successfully performed complex counting activities, such as alternating between letters and numbers

**long-term memory storage**

- after a long delay, recalled few list words, but his performance improved when he was given recognition cues, suggesting that he stored the list words in his long-term memory but had difficulty retrieving them without prompts
- after a long delay, had great difficulty drawing a complex figure from memory, but recognized several elements of a design among an array of other shapes, suggesting that he stored the visual information in his long-term memory

**spatial ordering**

- his copy of a complex figure was a solid match with the original design